Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1.   (Currently amended) A method for using XML for both a protocol layer and application data, the protocol layer and application data having an XML-based structure, the method comprising the steps of:

      initiating a connection by a client to a server to form a session;

      responding by said server to said client indicating that said connection has been successfully completed;

      receiving a request from said client at said server for service;

      responding by said server to said client by providing said service; and

      terminating the connection by said client.

2.   (Original) The method according to claim 1, wherein said connection is a socket connection formed using TCP/IP.

3.   (Original) The method according to claim 1, wherein said receiving step comprises a preliminary step of said client submitting a request to said server for service.

4.   (Original) The method according to claim 3, wherein said submitting step and said second responding step are repeated a plurality of times until all requests for service by said client have been satisfied with responses by said server.

5.   (Original) The method according to claim 3, wherein an authentication process is handled by said submitting step and said second responding step.

6. (Original) The method according to claim 3, wherein said session is created by said client initiating a first XML document and said server responding by initiating a second XML document.

7. (Original) The method according to claim 3, wherein said second responding step is an error response.

8. (Original) The method according to claim 6, wherein said first XML document is written directly to an opened socket connection.

9. (Original) The method according to claim 6, wherein said first XML document is written using a library of functions.

10. (Original) The method according to claim 6, wherein said first and said second XML documents are ongoing and further wherein said ongoing XML documents are incrementally interpreted and processed using an XML parser.

11. (Original) The method according to claim 10, wherein XML has been augmented to include meta-tags.

12. (Original) The method according to claim 10, wherein said request for service submitted by said client has a client request tag.

13. (Original) The method according to claim 12, wherein said response to said client, for said request for service, by said server has a response tag that corresponds to said client request tag.

14. (Original) The method according to claim 12, wherein said response to said client, for said request for service, by said server has an error response tag that corresponds to said client request tag.

15. (Original) The method according to claim 12, wherein said client request tag has a unique identifier attribute.

16. (Original) The method according to claim 15, wherein said unique identifier attribute used in said client request tag is carried in said response tag forwarded by said server to said client.

17. (Original) The method according to claim 15, wherein said unique identifier attribute used in said client request tag is carried in said error response tag forwarded by said server to said client.

18. (Original) The method according to claim 5, wherein said authentication process further comprises the steps of negotiating protection of subsequent transaction using said submitting step and said second responding step.

19. (Original) The method according to claim 11, wherein said meta-tags are used to encode arbitrary byte sequences.

20. (Original) The method according to claim 3, wherein said XML is compressed in order to reduce overhead.

21. (Original) The method according to claim 10, wherein XML is augmented to handle descriptive verbosity by using an index, wherein said index establishes a co-reference to an already fully described attribute.

22. (Original) The method according to claim 7, wherein said error response is permanent.

23.   (Original) The method according to claim 7, wherein said error response is temporary.

24.   (Original) The method according to claim 23, wherein said temporary error response is the result of one of: a semantically anomalous request, a failure of resources required by said server to carry out the request by said client and a recoverable error in the server.

25.   (Original) The method according to claim 22, wherein said permanent error response is the result of one of: a mistyping of a request, an incorrect client application and a communications error.

26.   (Original) The method according to claim 10, wherein said XML parser ignores XML comments.

27.   (Original) The method according to claim 26, wherein said XML comments are debugging comments.

28.   (Original) The method according to claim 27, wherein said debugging comments can be used to monitor activity of said client and activity of said server.

29.   (Currently amended) A system for using XML for both a protocol layer and application data, the protocol layer and application data having an XML-based structure, the method comprising:

        a client; and

        a server coupled to said client by a communications link

30.   (Original) The system according to claim 29, wherein a session is established over said communications link by said client initiating a connection to said server and further

wherein said server responds to said client indicating that said connection has been successfully completed.

31.   (Original) The system according to claim 30, wherein once said session is establishing, ongoing communications occurs over said communications link by said client submitting requests to said server for service, said server receiving requests for service from said client and said server responding to said requests for service.

32.   (Original) The system according to claim 30, wherein said client terminates said connection to said server.

33.   (Original) The system according to claim 30, wherein said connection is a socket connection formed using TCP/IP.

34.   (Original) The system according to claim 30, wherein an authentication process is handled by said client submitting a request for authentication and said server responding successfully to said request for authentication.

35.   (Original) The system according to claim 30, wherein said session is created by said client initiating a first XML document and said server responding by initiating a second XML document.

36.   (Original) The system according to claim 31, wherein said server responds to said client with an error response.

37.   (Original) The system according to claim 35, wherein said first XML document is written directly to an opened socket connection.

38.   (Original) The system according to claim 35, wherein said first XML document is written using a library of functions.

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39. (Original) The system according to claim 35, wherein said first and said second XML documents are ongoing and further wherein said ongoing XML documents are incrementally interpreted and processed using an XML parser.

40. (Original) The system according to claim 39, wherein XML has been augmented to include meta-tags.

41. (Original) The system according to claim 31, wherein said request for service submitted by said client has a client request tag.

42. (Original) The system according to claim 41, wherein said response to said client, for said request for service, by said server has a response tag that corresponds to said client request tag.

43. (Original) The system according to claim 41, wherein said response to said client, for said request for service, by said server has an error response tag that corresponds to said client request tag.

44. (Original) The system according to claim 41, wherein said client request tag has a unique identifier attribute.

45. (Original) The system according to claim 44, wherein said unique identifier attribute used in said client request tag is carried in said response tag forwarded by said server to said client.

46. (Original) The system according to claim 44, wherein said unique identifier attribute used in said client request tag is carried in said error response tag forwarded by said server to said client.

47.   (Original) The system according to claim 35, wherein said authentication process further comprises negotiating protection of subsequent transaction by said client submitting further requests for service and receiving successful responses from said server.

48.   (Original) The system according to claim 39, wherein said meta-tags are used to encode arbitrary byte sequences.

49.   (Original) The system according to claim 29, wherein said XML is compressed in order to reduce overhead.

50.   (Original) The system according to claim 39, wherein XML is augmented to handle descriptive verbosity by using an index, wherein said index establishes a co-reference to an already fully described attribute.

51.   (Original) The system according to claim 36, wherein said error response is permanent.

52.   (Original) The system according to claim 36, wherein said error response is temporary.

53.   (Original) The system according to claim 52, wherein said temporary error response is the result of one of: a semantically anomalous request, a failure of resources required by said server to carry out the request by said client and a recoverable error in the server.

54.   (Original) The system according to claim 51, wherein said permanent error response is the result of one of: a mistyping of a request, an incorrect client application and a communications error.

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55.   (Original) The system according to claim 39, wherein said XML parser ignores XML comments.

56.   (Original) The system according to claim 55, wherein said XML comments are debugging comments.

57.   (Original) The system according to claim 56, wherein said debugging comments can be used to monitor activity of said client and activity of said server.

58.   (Currently amended) A system for using XML for both a protocol layer and application data, the protocol layer and application data having an XML-based structure, the system comprising:

    means for initiating a connection by a client to a server to form a session;

    means for responding by said server to said client indicating that said connection has been successfully completed;

    means for submitting a request by said client to said server for service;

    means for receiving said request for service from said client at said server;

    means for responding by said server to said client by providing said service; and

    means for terminating the connection by said client.

59.   (Original) The method according to claim 4, wherein after a first occurrence of said submitting step and a first occurrence of said second responding step, said submitting step and said second responding step occur asynchronously.

60.   (Original) The method according to claim 59, wherein said session is created by said client initiating a first XML document and said server responding by initiating a second XML document.

61.   (Original) The method according to claim 60, wherein said first and second XML documents are ongoing and further wherein said ongoing XML documents are incrementally interpreted and processed using an XML parser.

62.   (Original) The method according to claim 61, wherein XML has been augmented to include meta-tags.

63.   (Original) The method according to claim 61, wherein said request for service submitted by said client has a client request tag.

64.   (Original) The method according to claim 63, wherein said response to said client, for said request for service, by said server has a response tag that corresponds to said client request tag.

65.   (Original) The method according to claim 64, wherein said responses by said server satisfying said requests for service by said client are matched with each other by a correspondence between said client request tag and said response tag.

66.   (Original) The system according to claim 31, wherein after a first occurrence of said client submitting said requests to said server for service, said requests for service and responses by said server to said requests for service occur asynchronously.

67.   (Original) The system according to claim 66, wherein said session is created by said client initiating a first XML document and said server responding by initiating a second XML document.

68.   (Original) The system according to claim 67, wherein said first and second XML documents are ongoing and further wherein said ongoing XML documents are incrementally interpreted and processed using an XML parser.

69.   (Original) The system according to claim 68, wherein XML has been augmented to include meta-tags.

70.   (Original) The system according to claim 66, wherein said request for service submitted by said client has a client request tag.

71.   (Original) The system according to claim 70, wherein said response to said client, for said request for service, by said server has a response tag that corresponds to said client request tag.

72.   (Original) The system according to claim 71, wherein said responses by said server satisfying said requests for service by said client are matched with each other by a correspondence between said client request tag and said response tag.